WATER SUPPLY OUTLOOK FOR OREGON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF

MAR. 1, 1973

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

U.S. DEPARTMENT of AGRICULTURE
CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY
SOIL CONSERVATION SERVICE

COVER PHOTO NUMBER ORC-286-4

USDA SCS PORTLAND, OREG 1973

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 8, 1973

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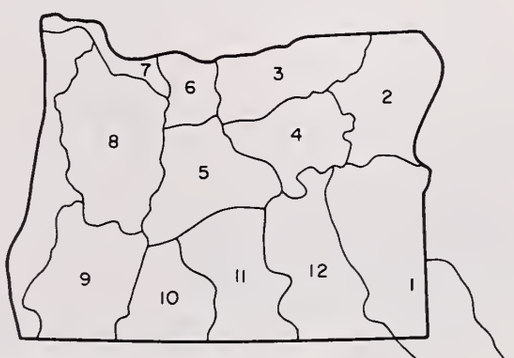
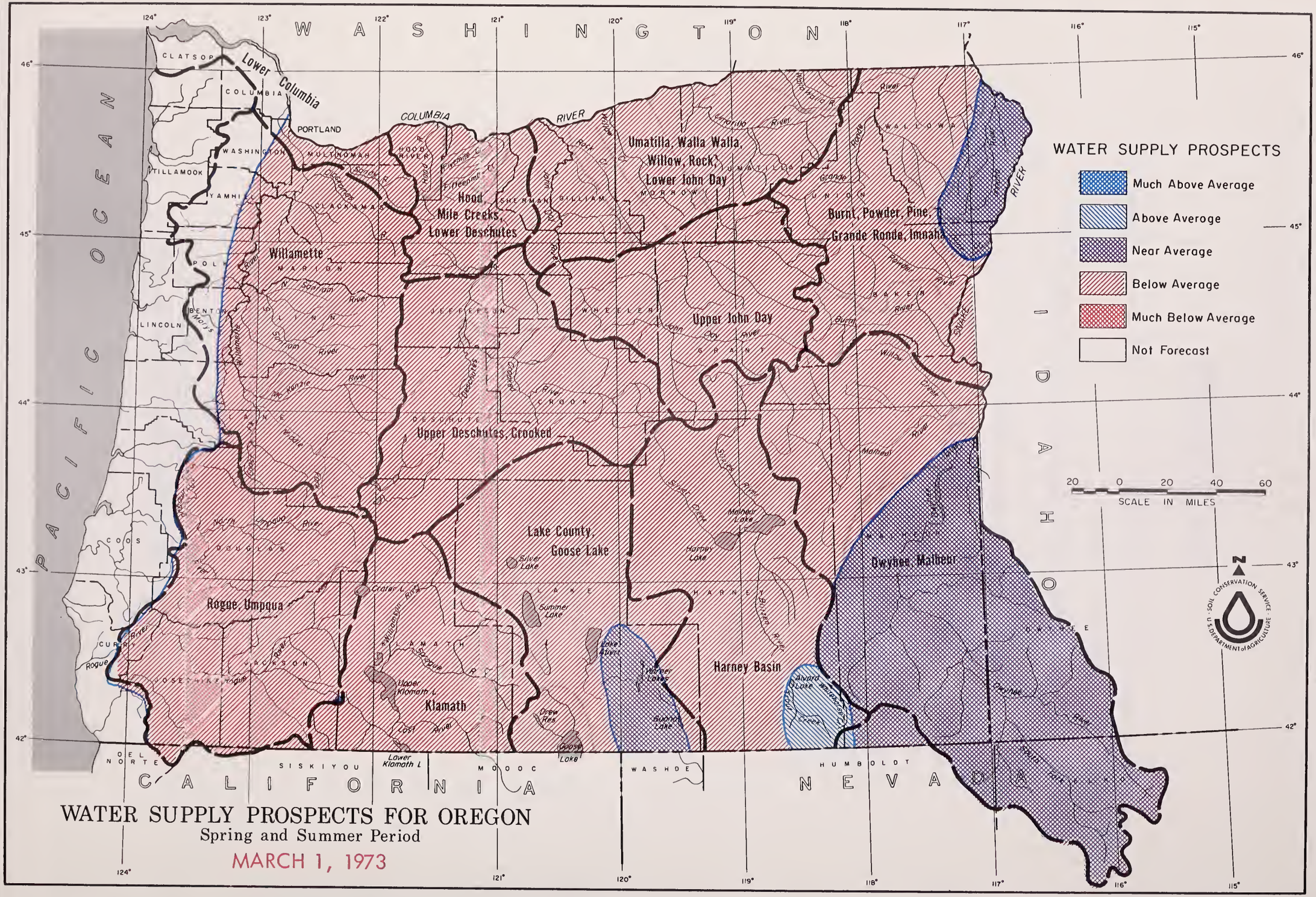


WATERSHED AREA LOCATIONS



WATER SUPPLY PROSPECTS FOR OREGON

Spring and Summer Period

MARCH 1, 1973

U. S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

WATER SUPPLY OUTLOOK for OREGON

MARCH 1, 1973

The current water supply outlook for next summer for Oregon water users ranges from much below average up to average. Most reservoirs will not fill. Streamflow will mostly be below to much below average.

SNOW COVER

The mountain snowpack is below to much below average for March 1, except in the Steens Mountains, Upper Owyhee in Nevada, and the Warner Mountains near Lakeview, which are all near normal. The snow cover in the Oregon Cascades compares closely to 1968 which was the poorest in recent years for snowpack accumulation.

PRECIPITATION

Precipitation in Oregon during February was only 25 to 70 percent of normal. This dry condition has persisted for several months now, and only the Owyhee Basin has had a normal amount of rainfall for the November-February period. Other areas of the state ranged from 60 to 80 percent of this same period.

SOIL MOISTURE

Due to lack of precipitation this last month and lack of snow melt, soils are generally not as wet as usual for this time of year. This condition, however, will only slightly affect the snowmelt runoff.

RESERVOIR STORAGE

Stored water supplies will save the day for many Oregon water users. Although Antelope, Bully Creek, Warmsprings, McKay, Ochoco, Cottonwood, Drews, and the Willamette reservoirs will probably not fill, the other major irrigation reservoirs are storing excellent amounts of water. Twenty-five reservoirs are storing 2,274,000 acre feet of water. This is 71 percent of full usable capacity and 117 percent of average.

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STREAMFLOW

Streamflow was extremely low during February due to poor precipitation. Although streams will rise as the snowpack begins to melt in April and May, streamflow will be deficient throughout the summer. This is illustrated by the following forecasts:

STREAM	FORECASTED APRIL-SEPTEMBER RUNOFF Percent 1953-67 Average
Owyhee Net Inflow	91
Malheur near Drewsey	71
Deschutes near Benham Falls	89
Grande Ronde near La Grande	54
Willamette, Mid. Fk. near Oakridge	67
Klamath Lake net Inflow	68
Rogue near Raygold	76
Silvies near Burns	70
John Day, Mid. Fork near Ritter	70

These forecasts assume that average conditions of precipitation and temperature will occur from now until the end of the forecast period.

This report contains data furnished by the Oregon State Engineer, U.S. Geological Survey, NOAA National Weather Service, and other cooperators.

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

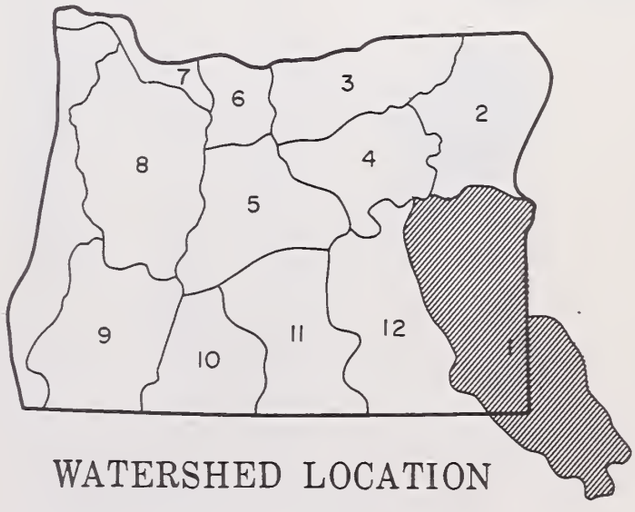
GENERAL OUTLOOK

WATER SUPPLIES IN MALHEUR COUNTY WILL BE EXCELLENT TO AVERAGE FOR USERS WITH STORED WATER. SOME LATE-SEASON SHORTAGES MAY OCCUR WHERE WATER USERS DEPEND ON DIRECT DIVERSION FROM STREAMS IN THE NORTH END OF THE COUNTY. SNOW COVER VARIES FROM 104 PERCENT OF AVERAGE ON THE UPPER OWYHEE TO 76 PERCENT ON THE JORDAN CREEK DRAINAGE. FEBRUARY WAS VERY DRY WITH PRECIPITATION ONLY 38 PERCENT OF THE AVERAGE. THE NOVEMBER THRU FEBRUARY TOTAL IS 101 PERCENT OF AVERAGE. SOIL MOISTURE IS NEAR AVERAGE. THE APRIL-SEPTEMBER STREAM-FLOW FORECASTS RANGE FROM 91 PERCENT OF AVERAGE ON THE OWYHEE TO 69 PERCENT ON THE MALHEUR NEAR BEULAH. RESERVOIR STORAGE WAS 137 PERCENT OF AVERAGE, HOWEVER, IF PRESENT CONDITIONS CONTINUE ANTELOPE AND BULLY CREEK RESERVOIRS WILL NOT FILL. THE OWYHEE NET INFLOW WAS ONLY 54 PERCENT OF AVERAGE DURING FEBRUARY.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Average	Fair
Bully Creek	Average	Fair
Cow Creek	Average	Fair
Jordan Creek	Average	Fair
Jordan Valley Irrig. Dist.	Average	Average
McDermitt Creek	Average	Fair
Oregon Canyon Creek	Average	Average
Owyhee Project	Excellent	Excellent
Succor Creek	Average	Fair
Tenmile Creek	Average	Fair
Vale-Oregon Irrig. Dist	Average	Average
Warmsprings Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Average



WATERSHED LOCATION

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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Bully Creek at Warmsprings	10.0	77	March-May		11.4
Jordan Creek above Lone Tree Creek	67	79	April-July		85 [m]
	67	79	April-Sept.		85 [m]
Malheur near Drewsey	65	72	March-July		93
	51	71	April-Sept.		72
Malheur, North Fork at Beulah [d]	46	69	March-July		67
	41	69	April-Sept.		60
Owyhee Reservoir net Inflow [k]	323	88	March-July	905	369
	273	91	April-Sept.	504	300

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000	June 15	May 24
	250	June 30	June 20

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Antelope	70.0	4.5	23.1	11.8
Beulah	60.0	34.8	38.7	30.5
Bully Creek	30.0	14.5	14.9	12.7
Owyhee	715.0	603.4	621.2	411.8
Warmsprings	191.0	111.2	138.1	94.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [i]
Jordan Creek	1	93	98
Malheur River	3	97	84
Owyhee River	4	78	84

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Jordan Creek	4	40	75
Malheur River	5	65	85
Owyhee River	5	60	105

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

Area 2

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

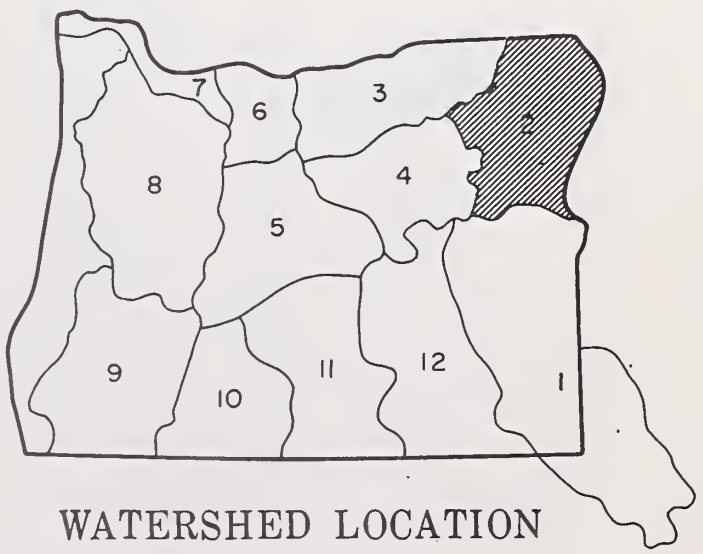
GENERAL OUTLOOK

WATER SUPPLIES IN NORTHEAST OREGON WILL VARY FROM NEAR AVERAGE FOR STREAMS DRAINING THE WALLOWA MOUNTAINS TO MUCH BELOW AVERAGE ON THE GRANDE RONDE DRAINAGE. THE SNOWPACK IS ONLY 46 PERCENT OF AVERAGE ON THE UPPER GRANDE RONDE AND 68 AND 78% ON THE POWDER AND WALLOWA-IMNAHA DRAINAGES RESPECTIVELY. PRECIPITATION WAS 45 PERCENT OF AVERAGE DURING FEBRUARY AND 82 PERCENT FOR THE NOVEMBER-FEBRUARY PERIOD. SOIL MOISTURE IS NEAR AVERAGE. RESERVOIR STORAGE IS ABOVE AVERAGE. THE GRANDE RONDE AT LA GRANDE FLOWED 22 PERCENT OF AVERAGE DURING FEBRUARY.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope	Average	Average
Baker Valley	Average	Fair
Big Creek	Average	Fair
Clover Cr. (nr. N. Powder)	Fair	Fair
Cove	Average	Fair
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Fair	Fair
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Fair	Fair
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Creek	Average	Fair
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Fair
Summerville	Fair	Fair
Sumpter Valley	Average	Fair
Union-Hot Lake	Fair	Fair
Unity	Average	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Bear near Wallowa	49	74	April-Sept.		66
Burnt near Hereford [d]	28	65	March-July		43
	23	66	April-Sept.		35
Catherine near Union	47	74	April-Sept.		64
Eagle Creek above Skull Creek	167	99	April-July		168 [m]
	182	100	April-Sept.		182 [m]
Grande Ronde at La Grande	109	52	March-July		207
	95	54	April-Sept.		175
Hurricane near Joseph	41	88	April-Sept.		47
Imnaha at Imnaha	272	88	April-Sept.		307
Lostine near Lostine	103	88	April-Sept.		125
Powder near Sumpter	34	63	April-July		55
	35	62	April-Sept.		56
Wallowa, East Fork near Joseph [d]	11.4	90	March-Sept.		12.7
	10.8	90	April-Sept.		12.0

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Phillips Lake	73.5	46.8	53.3	- -
Thief Valley	17.4	17.4	17.4	- -
Unity	25.2	12.8	13.0	11.9
Wallowa Lake	37.5	14.6	20.8	22.4

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Burnt River	4	45	70
Grande Ronde River above La Grande	4	25	45
Powder River	5	45	70
Wallowa, Imnaha, Catherine Creek	6	55	80

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [i]
Burnt, Powder	2	103	87
Grande Ronde, Catherine Creek, Imnaha River	2	95	98

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 3

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

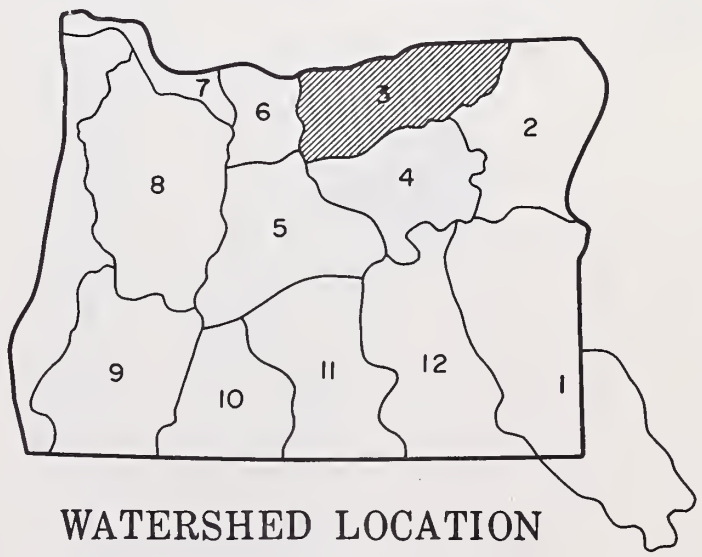
GENERAL OUTLOOK

THE WATER SUPPLY OUTLOOK FOR USERS IN UMATILLA AND MORROW COUNTIES WILL BE BELOW AVERAGE THIS SPRING AND SUMMER. STREAMFLOW FORECASTS RANGE FROM 50 PERCENT OF AVERAGE ON THE UMATILLA RIVER NEAR GIBBON TO 80 PERCENT FOR THE SOUTH FORK OF THE WALLA WALLA RIVER. SNOW COVER VARIES FROM 44 PERCENT ON THE UMATILLA TO 52 PERCENT ON THE WALLA WALLA RIVER DRAINAGE. THE FEBRUARY RAINFALL WAS 65 PERCENT OF AVERAGE. SOILS ARE HOLDING NEAR AVERAGE AMOUNTS OF WATER. COLD SPRINGS AND McKAY RESERVOIRS ARE HOLDING BELOW AVERAGE AMOUNTS OF WATER AND IF THE PRESENT TREND CONTINUES THEY WILL NOT FILL THIS SEASON.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fork	Fair	Fair
Walla Walla River, So. Fork	Fair	Fair
Walla Walla River, Main	Fair	Fair
Walla Walla River, Little	Fair	Fair
Couse Creek	Fair	Fair
Dry Creek	Fair	Fair
Pine Creek	Fair	Fair
Umatilla River, Main	Fair	Fair
Wildhorse Creek	Fair	Fair
Umatilla R. (Cold Springs Reservoir)	Average	Fair
Umatilla R. (McKay Res.)	Average	Fair
McKay Creek	Fair	Fair
Birch Creek	Fair	Fair
Butter Creek	Fair	Fair
Willow Creek	Fair	Fair
Rhea Creek	Fair	Fair
Rock Creek (John Day Tributary)	Fair	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average i
Birch Creek at Rieth	14	60	March-July		24
	10.8	60	April-Sept.		18.4
Butter Creek near Pine City	7.4	60	March-July		12.4
McKay near Pilot Rock	16	60	April-July		27
	17	60	April-Sept.		28
Umatilla near Gibbon	50	50	March-Sept.		99
	40	50	April-Sept.		80
Umatilla at Pendleton	135	65	March-Sept.		208
	101	65	April-Sept.		155
Walla Walla, South Fork near Milton	63	80	March-Sept.		79
	54	80	April-Sept.		67

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton	550	May 10	May 22

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average i
Cold Springs	50.0	34.4	33.7	40.3
McKay	73.8	22.6	62.0	35.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average i
Umatilla, Walla Walla, McKay Creek	3	93	88

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average i
McKay Creek	3	20	45
Umatilla River	3	25	45
Walla Walla River	2	25	50

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 4

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of

MARCH 1, 1973

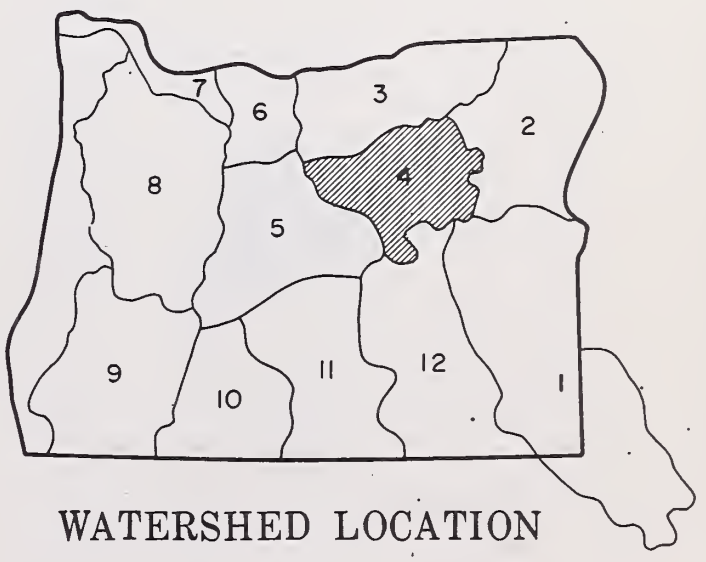
U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

WATER SUPPLIES IN THE UPPER JOHN DAY RIVER BASIN WILL BE BELOW AVERAGE FOR THE 1973 SEASON. STREAMFLOW FORECASTS FOR THE APRIL-SEPTEMBER PERIOD RANGE FROM 70 PERCENT FOR THE MIDDLE FORK OF THE JOHN DAY AT RITTER TO 78% FOR STRAWBERRY CREEK AT PRAIRIE CITY. THE MOUNTAIN SNOWPACK IS 65 TO 80 PERCENT OF AVERAGE. FEBRUARY PRECIPITATION WAS 67 PERCENT OF AVERAGE. SOIL MOISTURE IS NEAR AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek	Average	Fair
Beech Creek-Fox-Long Cr.	Average	Fair
Bridge-Mountain Creeks	Average	Fair
Camas Creek	Average	Fair
Cherry Creek	Average	Fair
Indian-Pine Creeks	Average	Fair
John Day River, Main Fork	Average	Fair
John Day River, Mid. Fork	Average	Fair
John Day River, N. Fork	Average	Fair
John Day River. S. Fork	Average	Fair
Monument-Kimberly	Average	Fair
Strawberry Creek	Average	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average i
Camas Creek near Ukiah	34	70	March-July		48
	27	70	April-Sept.		39
John Day at Prairie City	38	75	March-July		51
	33	75	April-Sept.		46
John Day, Middle Fork at Ritter	96	71	March-July		135
	81	70	April-Sept.		116
John Day, North Fork at Monument	468	69	March-July		682
	414	71	April-Sept.		583
Strawberry near Prairie City	6.4	82	March-July		7.9
	6.5	78	April-Sept.		8.4

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average i
John Day above Dayville	6	100	93
John Day, North Fork	2	94	93

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average i
John Day, North Fork	7	40	65
John Day abv. Dayville	5	50	80

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

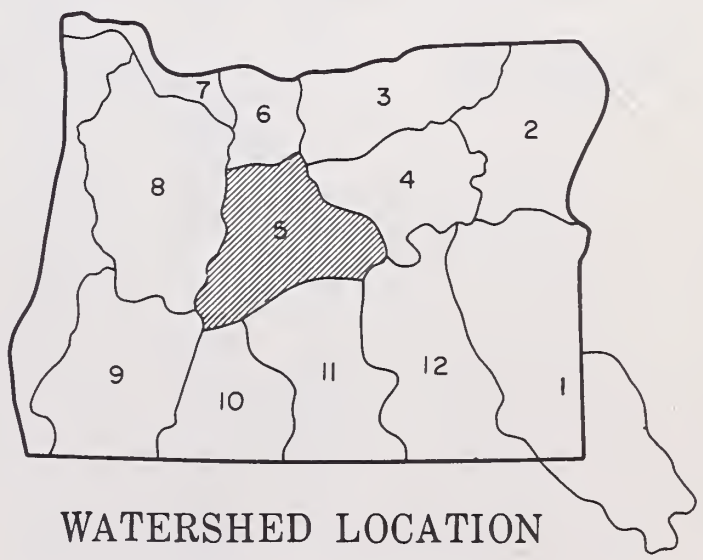
GENERAL OUTLOOK

WATER SUPPLIES FOR CENTRAL OREGON WATER USERS WILL VARY FROM BELOW AVERAGE FOR THOSE DEPENDING ON DIRECT DIVERSION TO AVERAGE FOR IRRIGATION PROJECTS AND OTHER USERS WITH STORED WATER. THE MOUNTAIN SNOWPACK VARIES FROM 50 PERCENT OF AVERAGE ON THE TUMALO AND SQUAW CREEK DRAINAGES TO 70 PERCENT ON THE CROOKED-OCHOCO DRAINAGES. FEBRUARY PRECIPITATION WAS 46 PERCENT OF AVERAGE AND 83 PERCENT FOR THE NOVEMBER THRU FEBRUARY PERIOD. SOIL MOISTURE IS NEAR AVERAGE. RESERVOIR STORAGE IS ABOVE AVERAGE AND MOST SHOULD FILL.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation Dist.	Excellent	Average
Bear Creek	Average	Fair
Beaver Creek	Average	Fair
Camp Creek	Average	Fair
Central Ore. Irrig. Dist.	Excellent	Average
Crooked River	Fair	Fair
Deschutes River	Average	Average
Hay-Trout Creeks	Fair	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Fair
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Fair	Fair
Sisters Irrigation Dist.	Average	Fair
Snow Creek Irrig. Dist.	Average	Fair
Squaw Creek Irrig. Dist.	Average	Fair
Swalley Ditch	Excellent	Average
Tumalo Project	Average	Fair
Walker Basin Irrig. Dist.	Excellent	Average



WATERSHED LOCATION

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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Beaver Creek near Paulina	23	72	March-July		33
	14.4	72	April-Sept.		20
Crane Prairie Reservoir Total Inflow [d]	97	77	April-Sept.		126
Crescent at Crescent Lake	18	71	March-July		26
	20	72	April-Sept.		28
Crooked near Post above Prineville Reservoir	101	72	March-July		140
	73	73	April-Sept.		101
Deschutes at Benham Falls [d]	339	86	April-July		393
	533	89	April-Sept.		596
Deschutes below Snow Creek	62	85	March-Sept.		73
	56	85	April-Sept.		66
Deschutes, Little near La Pine [d]	62	64	March-July		98
	58	61	April-Sept.		95
Ochoco Reservoir Net Inflow	17	56	March-July		30
	14	60	April-Sept.		23
Odell near Crescent	24	80	April-Sept.		30
Squaw near Sisters	41	80	April-Sept.		51
Tumalo near Bend [d]	43	87	April-Sept.		49

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow	300	*	July 15
Crooked R. near Post	100	May 22	June 1
Deschutes at Bend	1500	*	July 1
Little Deschutes near La Pine	400	May 27	June 7
	200	June 15	July 8

*Forecast issued April 1.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Crane Prairie	55.3	54.0	55.8	46.6
Crescent Lake	86.9	85.2	76.2	49.2
Ochoco	47.5	27.3	31.0	27.5
Prineville	153.0	112.5	100.8	97.4
Wickiup	200.0	187.1	192.2	178.3

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [i]
Crooked R., Upper Deschutes River	2	89	85

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Crooked, Ochoco	4	40	70
Deschutes abv. Wickiup	3	35	55
Little Deschutes	4	40	55
Tumalo & Squaw Crs.	3	30	50

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 6

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

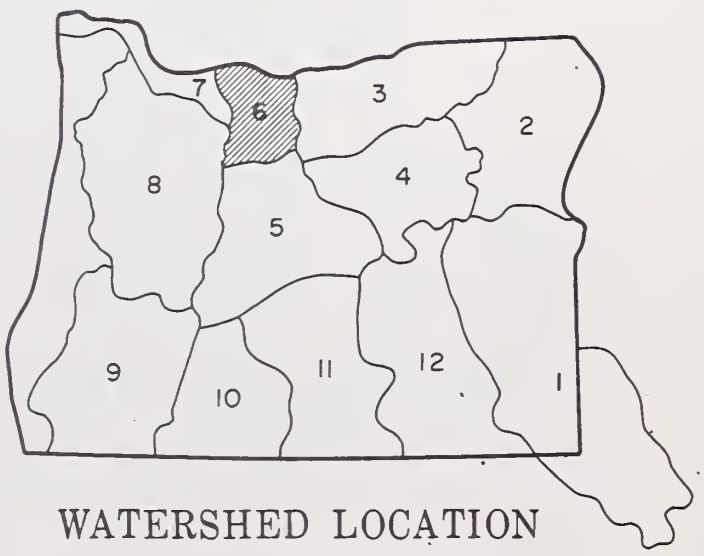
GENERAL OUTLOOK

BELOW AVERAGE TO FAIR WATER SUPPLIES ARE FORECAST FOR USERS IN HOOD RIVER AND WASCO COUNTIES. STREAMFLOW FORECASTS FOR THE APRIL-SEPTEMBER PERIOD RANGE FROM 60 PERCENT ON THE WHITE RIVER TO 69 PERCENT ON THE HOOD RIVER. IF PRESENT CONDITIONS PERSIST SHORTAGES WILL OCCUR IN LATE SPRING AND SUMMER. THE MOUNTAIN SNOWPACK IS 40 PERCENT OF AVERAGE. PRECIPITATION DURING FEBRUARY WAS 24 PERCENT OF AVERAGE AND 68 PERCENT OF AVERAGE FOR THE NOVEMBER THRU FEBRUARY PERIOD. SOIL MOISTURE IS NEAR AVERAGE. CLEAR LAKE (WASCO) RESERVOIR HELD 7,300 ACRE FEET ON FEBRUARY 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek)	Average	Fair
Badger Creek	Average	Fair
Dee Irrigation Dist.	Average	Fair
East Fork Irrig. Dist.	Average	Fair
Farmers Irrigation Dist.	Average	Fair
Hood River Irrig. Dist.	Average	Fair
Juniper Flat	Average	Fair
Middle Fork Irrig. Dist.	Average	Fair
Mile Creeks	Average	Fair
Mill Creek	Average	Fair
Mount Hood Irrig. Dist.	Average	Fair
Rock-Gate-Threemile Crs.	Average	Fair
Tygh Creek	Average	Fair
White River	Average	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Hood River near Tucker Bridge	197	70	April-July		282
	232	69	April-Sept.		336
Hood, West Fork near Dee	98	70	April-July		140
	111	69	April-Sept		161
White below Tygh Valley	71	56	April-July		128
	87	60	April-Sept.		144

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	*30	July 15-31	**39

*Average cfs forecast to flow for this two-week period.

**Average cfs for period of record.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Clear Lake (Wasco)	11.9	7.3	7.9	3.5

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Hood River	6	25	45
Mile Creeks	3	35	60
White River	3	25	45

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [i]
Hood River, Mile Creeks	1	100	

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

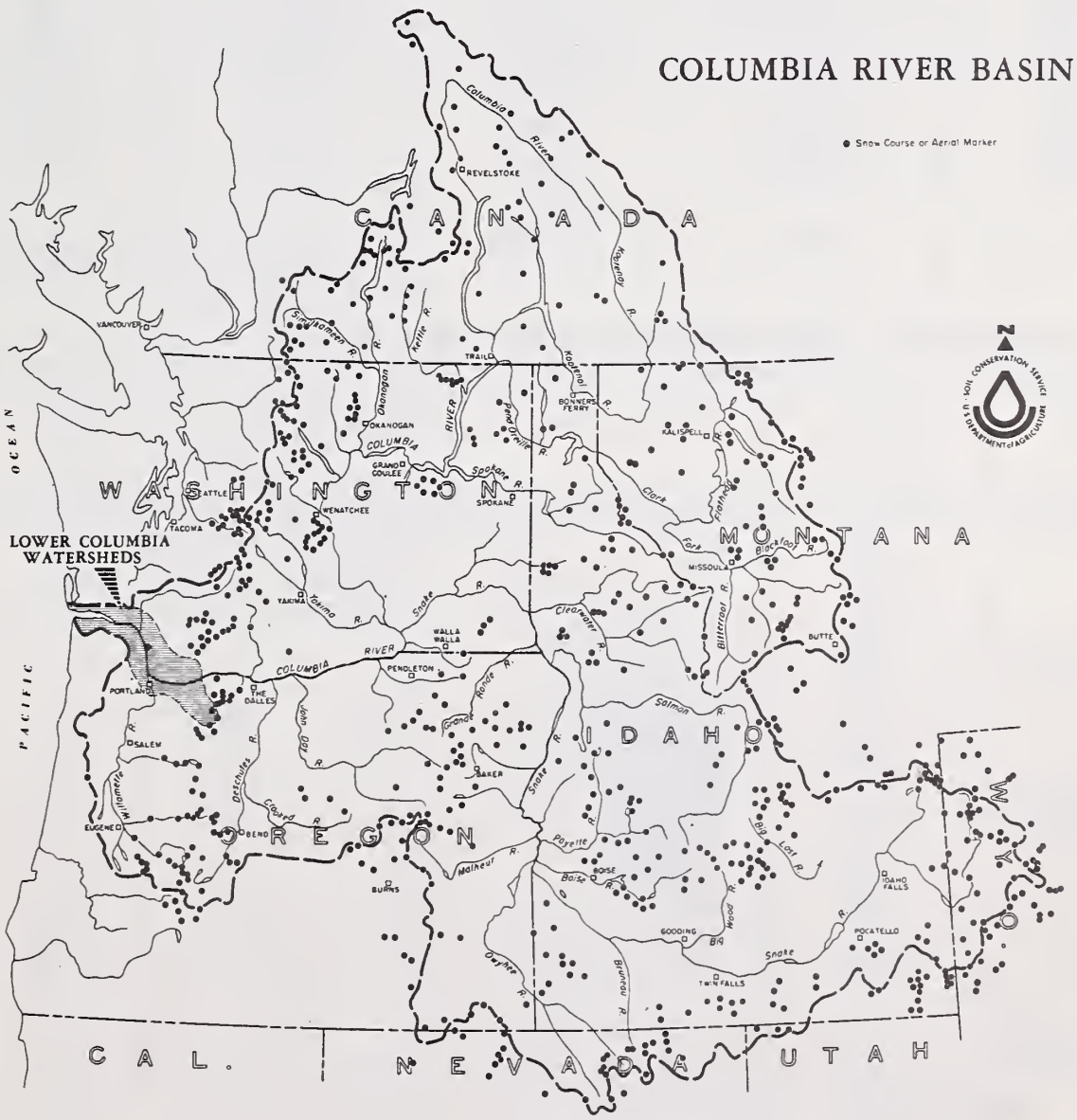
as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

SNOW COVER IN THE COLUMBIA BASIN NOW RANGES FROM A LOW OF 15 PERCENT OF NORMAL ON THE PALOUSE RIVER IN EASTERN WASHINGTON-WESTERN IDAHO, TO A HIGH OF 109 PERCENT ON IDAHO'S BLACKFOOT RIVER. THE SNOWPACK GENERALLY RANGES BETWEEN ABOUT ONE-HALF TO SLIGHTLY OVER THREE-FOURTHS OF USUAL AMOUNTS. STORAGE IN IRRIGATION RESERVOIRS IS WELL ABOVE AVERAGE. FLOW OF THE COLUMBIA RIVER AT THE DALLES IS NOW EXPECTED TO BE ABOUT THREE-FOURTHS OF THE NORMAL AMOUNT.



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SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER, BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average [i]
Sandy River	2	25	45

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Columbia at The Dalles [d]	57,000	70	April-June	96,290	72,406
	78,500	75	April-Sept.	134,620	105,176
Sandy River near Marmot	251	70	April-July		359
	289	70	April-Sept.		413

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW [d] (1,000 A.F.) APR.— SEPT.	APR.— JUNE	MAY—JUNE	PEAK [e] (1,000 c.f.s)	DATE
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

Area 8

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

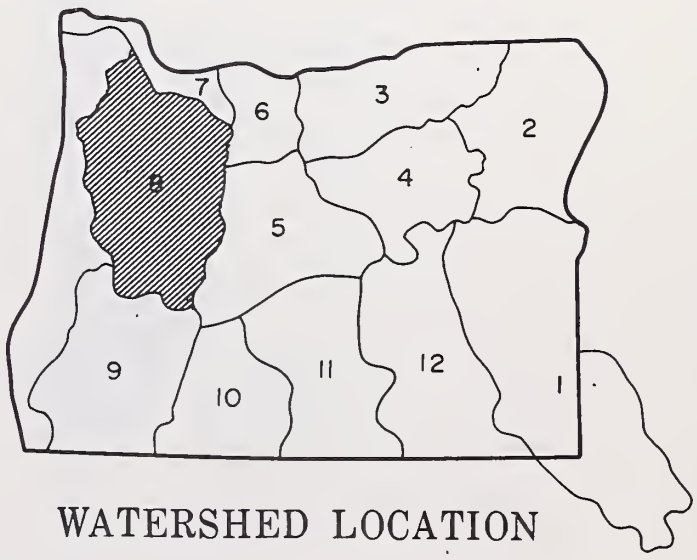
GENERAL OUTLOOK

BELOW AVERAGE TO FAIR WATER SUPPLIES ARE FORECAST FOR STREAMS IN THE WILLAMETTE BASIN THIS SPRING AND SUMMER. STREAMFLOW FORECASTS VARY FROM 64 PERCENT ON THE SOUTH SANTIAM TO 80 PERCENT ON THE McKENZIE. THE MOUNTAIN SNOWPACK VARIES FROM 30 TO 50 PERCENT OF AVERAGE ON THE MIDDLE FORK OF THE WILLAMETTE. RAINFALL DURING FEBRUARY WAS 28 PERCENT AND 74 PERCENT FOR THE NOVEMBER THRU FEBRUARY PERIOD. THE FEBRUARY FLOW OF THE MIDDLE FORK OF THE WILLAMETTE BELOW THE NORTH FORK WAS 44 PERCENT OF AVERAGE. MOST OF THE MULTIPURPOSE RESERVOIRS ON THE WILLAMETTE ARE AT LOW LEVELS AND IF PRESENT CONDITIONS CONTINUE WILL NOT FILL.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya	Fair	Fair
Clackamas	Fair	Fair
McKenzie	Fair	Fair
Molalla	Fair	Fair
Santiam, North	Fair	Fair
Santiam, South	Fair	Fair
Willamette, Coast Fork	Fair	Fair
Willamette, Middle Fork	Fair	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Clackamas at Estacada	480	70	April-July		689
	550	69	April-Sept.		800
Clackamas above Three Lynx	361	70	April-July		517
	433	71	April-Sept.		610
McKenzie at McKenzie Bridge	366	79	April-July		465
	492	80	April-Sept.		614
McKenzie near Vida	815	75	April-July		1087
	1005	76	April-Sept.		1321
McKenzie, South Fork near Rainbow	153	69	April-July		221
	179	71	April-Sept.		252
Oak Grove Fork above Power Intake	94	75	April-July		125
	123	76	April-Sept.		163
Row near Dorena	69	65	April-July		106
	73	66	April-Sept.		110
Santiam, North at Mehama[d]	504	63	April-July		800
	576	64	April-Sept.		901
Santiam, South at Waterloo	375	63	April-July		596
	405	64	April-Sept.		633
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge[d]	471	65	April-July	890	725
	554	67	April-Sept.	1011	828
Willamette, No. Fk. of Mid. Fk. near Oakridge	128	65	April-July		198
	166	67	April-Sept.		219
Willamette at Salem[d]	2999	64	April-July		4696
	3496	67	April-Sept.		5199

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Clackamas River	2	15	30
McKenzie River	3	20	40
Row River	2	20	40
Santiam River	4	15	30
Willamette, Mid. Fk.	5	30	50

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Blue River	85.6*	22.1	53.2	- -
Cottage Grove	30.0*	7.7	11.6	9.3
Cougar	155.2*	25.7	73.2	- -
Detroit	299.9*	56.1	178.6	94.9
Dorena	70.5*	16.3	33.8	21.1
Fall Creek	115.0*	23.8	57.6	- -
Fern Ridge	94.2*	32.0	50.8	33.4
Foster	30.0*	4.3	8.3	- -
Green Peter	270.0*	63.2	168.6	- -
Hills Creek	200.0*	45.2	0.0	63.3
Lookout Point	337.2*	31.0	167.6	116.9
Timothy Lake	61.7	50.2	58.0	47.8

*Multiple purpose reservoir--space reserved primarily for flood runoff.

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

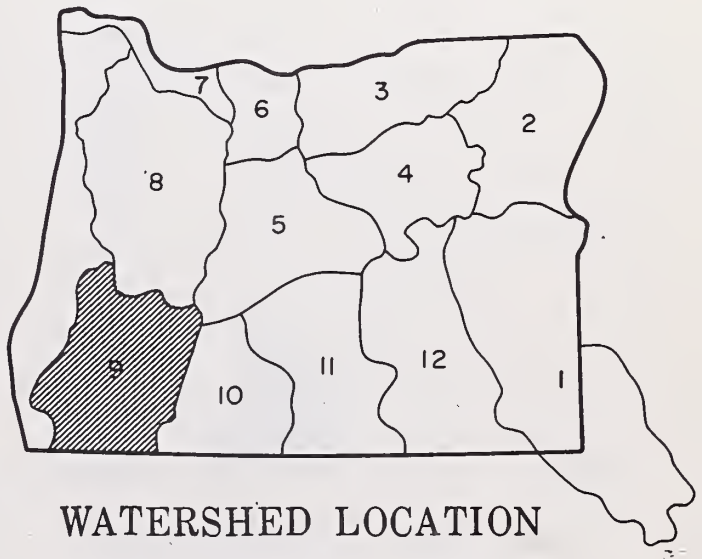
GENERAL OUTLOOK

NEAR AVERAGE TO BELOW AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR USERS IN THE ROGUE, UMPQUA DRAINAGES. STREAMFLOW FORECASTS FOR THE APRIL-SEPTEMBER PERIOD WILL VARY FROM 64 PERCENT ON THE APPLEGATE NEAR COPPER TO 100 PERCENT ON THE CLEARWATER ABOVE TRAP CREEK AND ABOUT 80 PERCENT ON THE ROGUE AND UMPQUA. STREAMS DRAINING THE SISKIYOUS AND LOWER ELEVATIONS WILL EXPERIENCE WATER SHORTAGES DURING THE LATE SPRING AND SUMMER IF PRESENT CONDITIONS CONTINUE. SNOW COVER VARIES FROM 50 PERCENT IN THE SISKIYOUS TO 70 PERCENT OF AVERAGE IN THE CASCADES. PRECIPITATION DURING FEBRUARY WAS 34 PERCENT OF AVERAGE AND FOR THE NOVEMBER THRU FEBRUARY PERIOD WAS 61 PERCENT. THE FEBRUARY FLOW OF THE UMPQUA NEAR ELKTON WAS 36 PERCENT AND THE ROGUE AT RAYGOLD 46 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek	Average	Fair
Applegate River, Big	Average	Fair
Applegate River, Little	Average	Fair
Ashland Creek	Average	Fair
Butte Creek, Big	Average	Fair
Butte Creek, Little	Average	Fair
Cow Creek	Average	Fair
Deer Creek	Average	Fair
Elk Creek	Average	Fair
Emigrant Creek (abv. res.)	Average	Fair
Evans Creek	Average	Fair
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Average	Fair
Illinois River, East Fork	Average	Fair
Illinois River, West Fork	Average	Fair
Jump-off-Joe Creek	Average	Fair
Neil Creek	Average	Fair
Red Blanket Creek	Average	Fair
Rogue River	Average	Fair
Sucker Creek	Average	Fair
Table Rock Irrig. Dist.	Average	Fair
Thompson Creek	Average	Average
Wagner Creek	Average	Average
Williams Creek	Average	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Applegate near Copper	90	64	April-Sept.		140
Clearwater above Trap Creek[d]	73	100	April-Sept.		73
Fourmile Lake net Inflow [d]	3.6	90	April-Sept.		4.1
Hyatt Reservoir Net Inflow[d]	2.5	50	April-July		5.2
Illinois River near Kerby	153	75	April-July		205
	158	75	April-Sept.		211
Little Butte, N. Fk. at Fish Lk. nr. Lake Cr.[d]	10.0	70	April-Sept.		14.4
Little Butte, South Fork near Lake Creek	20	61	April-July		33
Rogue above Prospect	212	79	April-July		269
	261	80	April-Sept.		326
Rogue, South Fork near Prospect[d]	52	84	April-July		62
	60	81	April-Sept.		74
Rogue at Raygold near Central Point	593	76	April-July	931	781
	719	76	April-Sept.	1132	941
Rogue at Grants Pass	765	81	April-Sept.		940
Umpqua, No. blw. Lemolo Res. nr Toketee Falls[d]	135	77	April-Sept.		176

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek, South Fork	100	May 1	May 27
Rogue at Raygold	1200	July 11	Aug. 7
	*1400	July 1	
	*1000	Aug. 15	

*Average daily cfs forecast to flow on this date.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Emigrant Lake	39.0	26.1	29.9	28.3*
Fish Lake	8.0	7.8	8.1	5.7
Fourmile Lake	16.1	11.2	- -	9.9
Howard Prairie	60.0	42.9	59.9	26.1
Hyatt Prairie	16.1	9.4	16.0	10.7

*Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Applegate	3	50	57
Bear Creek	2	60	60
Butte Creek	4	45	75
Illinois River	3	50	50
North Umpqua	3	35	50
Rogue River	6	45	70

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 10

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

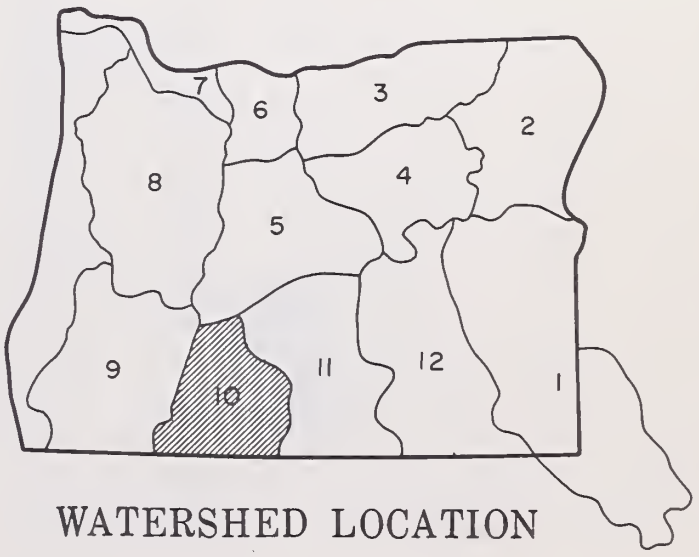
GENERAL OUTLOOK

KLAMATH COUNTY WATER USERS DEPENDING ON DIRECT DIVERSIONS WILL HAVE BELOW AVERAGE TO FAIR WATER SUPPLIES THIS SPRING AND SUMMER, WITH SHORTAGES OCCURRING IN LATE SPRING AND SUMMER IF PRESENT CONDITIONS PERSIST. USERS WITH ACCESS TO STORED WATER WILL HAVE ADEQUATE SUPPLIES. THE MOUNTAIN SNOWPACK IS 55 TO 65 PERCENT OF AVERAGE. PRECIPITATION DURING THE NOVEMBER THRU FEBRUARY PERIOD IS 78 PERCENT OF NORMAL. THE UPPER KLAMATH NET INFLOW WAS 79 PERCENT OF AVERAGE DURING FEBRUARY. RESERVOIR STORAGE IS ABOVE AVERAGE AND MOST RESERVOIRS SHOULD FILL.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley	Fair	Fair
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Fair	Fair
Upper Klamath Lake	Average	Fair
Williamson River	Fair	Fair



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Clear Lake Reservoir Inflow[k]	48	74	March-July		65
Gerber Reservoir Inflow[k]	21	65	March-July		33
Sprague near Chiloquin	143	54	March-July		320
	173	58	April-Sept.		296
Upper Klamath Lake net Inflow[k]	451	64	March-July	914	701
	422	68	April-Sept.	599	619
Williamson below Sprague River	321	63	March-July		510
	304	64	April-Sept.		475

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	THIS YEAR'S MOISTURE as PERCENT OF: Average [i]
Upper Klamath	1	92	90

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Clear Lake	440.2	310.4	336.6	227.3
Gerber	94.0	59.4	85.4	48.6[m]
Upper Klamath Lake	584.0	443.7	472.4	421.5

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	THIS YEAR'S SNOW WATER AS PERCENT OF Average [i]
Lost River	3	50	85
Sprague River	3	55	65
Upper Klamath	8	45	60
Williamson River	3	50	55

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 11

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

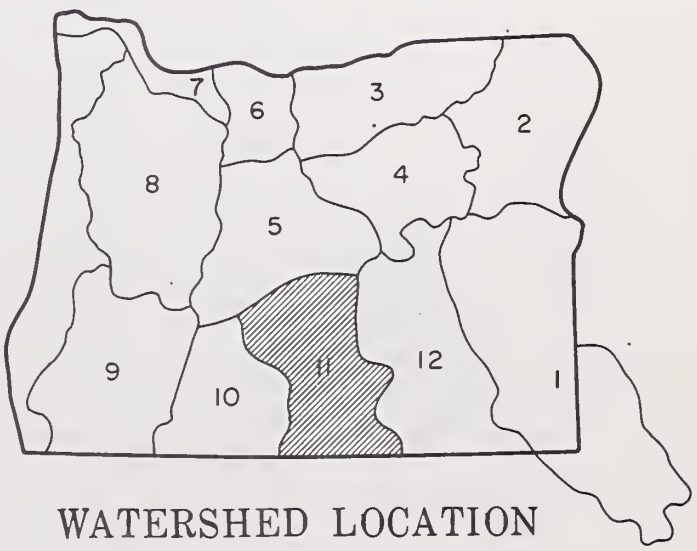
GENERAL OUTLOOK

LAKE COUNTY WATER USERS WILL HAVE NEAR NORMAL WATER SUPPLIES DURING THE 1973 SEASON ON STREAMS HEADING IN THE WARNER MOUNTAINS. WATER SUPPLIES IN THE NORTH AND WEST PARTS OF THE COUNTY WILL BE BELOW AVERAGE. THOSE AREAS WILL EXPERIENCE LATE SPRING AND SUMMER SHORTAGES IF THE PRESENT CONDITIONS PERSIST WHERE STORED WATER IS NOT AVAILABLE. SNOW COVER VARIES FROM 40 PERCENT ON SILVER CREEK TO 110 PERCENT ON TWENTYMILE CREEK. WINTER PRECIPITATION HAS BEEN 70 PERCENT OF AVERAGE. RESERVOIR STORAGE IS ABOVE AVERAGE. THE FEBRUARY FLOW OF THE CHEWAUCAN NEAR PAISLEY WAS 51 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan River	Fair	Fair
Crooked Creek	Fair	Fair
Deep Creek	Average	Average
Dry Creek	Fair	Fair
East Side Goose Lake	Fair	Fair
Guano Lake	Average	Fair
Honey Creek	Average	Fair
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mountain)	Fair	Fair
Silver-Buck Creeks	Fair	Fair
Summer Lake	Average	Fair
Thomas Creek	Fair	Fair
Twentymile Creek	Average	Average
Warner Lakes	Average	Average



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Chewaucan near Paisley	59	66	March-July	117	89
Deep above Adel	68	93	March-July		73
Drews Reservoir net Inflow [d]	31	67	March-July		46
Honey Creek near Plush	15.1	84	March-July		18.0
Silver Creek near Silver Lake	10.0	49	March-July		21
Twentymile near Adel	23	100	March-July		23

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average [i]
Chewaucan, Silver Creek, Drew Creek	1	92	90
Honey, Deep, 20-Mi. Cr.	1	98	102

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage This Year	Usable Storage Last Year	Usable Storage Average [i]
Cottonwood	8.7	2.1	2.7	3.2*
Drews	63.0	41.1	50.3	38.3

*Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	Average [i]
Chewaucan River	3	55	45
Deep Creek	3	45	85
Drew Creek	3	60	90
Honey Creek	3	50	85
Silver Creek	3	30	40
Twentymile Creek	3	60	110

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Area 12

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of

MARCH 1, 1973

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

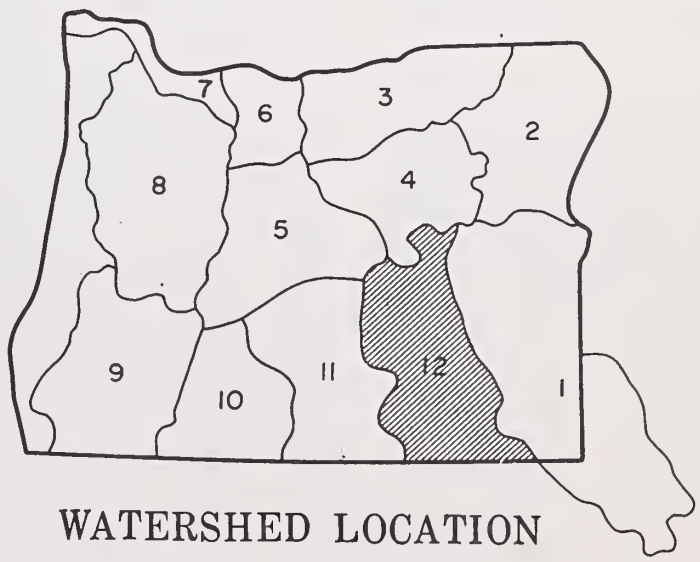
GENERAL OUTLOOK

HARNEY COUNTY WATER USERS ON STREAMS DRAINING THE STEENS AND TROUT CREEK MOUNTAINS WILL HAVE AVERAGE TO ABOVE AVERAGE WATER SUPPLIES. THE REMAINDER OF THE COUNTY WILL HAVE BELOW AVERAGE SUPPLIES OF WATER. THE SNOWPACK VARIES FROM OVER 100 PERCENT IN THE STEENS AND TROUT CREEK MOUNTAINS TO 65 PERCENT ON THE SILVER CREEK DRAINAGE. PRECIPITATION DURING FEBRUARY WAS 45 PERCENT OF AVERAGE. SOIL MOISTURE IS SLIGHTLY BELOW AVERAGE AND SOME RUNOFF WATER WILL BE ABSORBED.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley	Average	Fair
Cow Creek	Fair	Fair
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Fair	Fair
Rattlesnake Creek	Fair	Fair
Silver Creek	Fair	Fair
Silvies River	Fair	Fair
Soldier-Prather Creek	Fair	Fair
Trout Creek	Excellent	Average
Whitehorse Creek	Excellent	Average



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR FORECAST Thousand Acre Feet	THIS YEAR FORECAST Percent of Average	THIS YEAR FORECAST PERIOD	PAST RECORD THOUSAND ACRE FEET Last Year	PAST RECORD THOUSAND ACRE FEET Average [i]
Donner und Blitzen near Frenchglen	55	96	March-July		57
	53	96	April-Sept.		55
Silver near Riley	12.5	70	April-July		17.9
Silvies near Burns	70	70	March-July		101
	58	70	April-Sept.		83
Trout near Denio	9.7	127	March-July		7.7
	9.1	122	April-Sept.		7.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF: Last Year	Average [i]
Silvies River, Silver Cr.	3	96	94
Trout Cr., Donner und Blitzen River	2	-	126

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF Last Year	Average [i]
Donner und Blitzen R.	4	65	110
Silver Creek	3	45	65
Silvies River	4	50	80
Trout Creek	3	190	155

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 1

MARCH 1, 1973

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	2/28	17	4.4	14.3	4.2[h]
Battle Creek[e] (Ida.)	2/23	13	3.6	4.2	3.1[m]
Bear Creek[e] (Nev.)	3/2	52	16.8	25.0	15.3
Big Bend (Nev.)	2/27	27	6.6	13.4	6.9
Blue Mountain Springs	2/27	36	11.2	20.8	13.7
Blue Mtn. Springs Pillow*	2/27	-	9.8	16.3	- -
Buck Pasture[e]	2/23	6	1.6	0.0	2.3
Buckskin, Lower (Nev.)	2/28	28	7.6	11.4	6.7
Buckskin, Upper (Nev.)	2/28	30	9.2	14.7	7.2
Bull Basin[e] (Ida.)	2/23	4	1.1	0.0	1.1[m]
Bully Creek[e]	2/23	11	3.1	0.0	2.7[m]
Call Meadow[e]	2/23	12	3.4	2.1	3.5
Columbia Basin[e] (Nev.)	2/27	28	7.6	13.9	- -
Cottonwood-Indian[e]	2/23	0	0.0	0.0	0.7[m]
Crane Prairie	2/27	22	6.0	12.8	8.2
Disaster Peak (Nev.)	2/26	41	12.5	15.7	12.6
Eldorado Pass	2/27	11	3.1	3.2	2.7[h]
Fawn Creek[e] (Nev.)	2/27	19	4.9	9.6	- -
Fish Creek	2/23	60	20.7	31.3	19.6[h]
Fish Creek Pillow*	2/23	-	23.5	33.1	- -
Flag Prairie[e]	2/23	12	3.3	2.8	3.4[m]
Fox Creek (Nev.)	3/2	31	8.8	12.7	7.9[m]
Fry Canyon (Nev.)	2/26	25	7.2	10.3	6.0
Gold Creek (Nev.)	2/27	17	4.1	9.7	4.7
Granite Peak (Nev.)	3/1	46	15.9	15.8	10.7
Hyde Pasture[e] (Ida.)	2/23	14	3.9	8.0	4.2[m]
Jack Creek, Lower (Nev.)	[c]				
Jack Creek, Upper (Nev.)	2/29	18	4.7	11.1	8.0
Jack Peak (Nev.)	[c]				
Lake Creek R. S.	2/27	26	7.1	13.6	9.2
Laurel Draw[e] (Nev.)	2/28	26	7.4	12.5	6.2[h]
Logan Valley[e]	2/23	21	5.8	11.2	6.3[m]
Lookout Butte[e]	2/23	0	0.0	0.0	0.2[m]
Louse Canyon[e]	2/23	8	2.2	1.1	3.1[m]
Martin Creek (Nev.)	2/28	32	9.3	10.9	7.8
Merritt Mountain[e] (Nev.)	[b]			14.9	- -
Midas[e] (Nev.)	2/27	7	1.8	6.3	2.5[h]
Mud Flat (Ida.)	2/28	18	4.8	9.3	4.7[h]
Oregon Canyon	2/23	26	7.5	4.2	5.2[m]
Quinn Ridge[e] (Nev.)	2/23	2	0.6	0.0	2.3[m]
Red Canyon[e] (Ida.)	2/23	21	5.9	12.6	4.8[m]
Rock Spring	2/26	17	4.3	7.2	4.8
Rodeo Flat (Nev.)	2/26	21	6.7	9.0	5.5
76 Creek[e] (Nev.)	3/2	34	10.4		
Silver City (Ida.)	3/1	31	8.6	25.6	12.5
Silvies	2/23	28	9.3	18.9	10.7[h]
Silvies Pillow*	2/23	-	12.1	28.6	- -
South Mountain #2 (Ida.)	2/26	26	7.4	19.1	9.5
Stag Mountain[e] (Nev.)	2/27	24	6.8	10.5	- -
Stinking Water	2/26	5	2.2	T	2.7[h]
Succor Creek[e] (Ida.)	2/23	12	3.4	13.6	5.0[m]
Taylor Canyon (Nev.)	2/23	21	6.0	5.2	4.2
Toe Jam[e] (Nev.)	2/27	36	10.8	7.8	- -
Tremewan Ranch (Nev.)	2/26	8	3.0	0.4	1.1
Triangle[e] (Ida.)	2/23	0	0.0	0.0	0.6
Trout Creek[e]	2/23	34	10.2	5.6	6.3[m]
"V" Lake[e]	2/23	21	6.5	11.5	3.6[m]
Vaught Ranch[e] (Ida.)	2/23	20	5.4	6.3	- -
War Eagle[e] (Ida.)	2/23	65	18.2	24.1	- -

*Manometer Reading.

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	2/28	70	23.6	38.4	31.2
Aneroid Lake #2	2/28	63	21.8	35.2	26.9
Anthony Lake	2/28	48	15.5	34.5	22.2
Bald Mountain[e] (Ore.)	2/27	45	13.5	36.1	19.9[m]
Beaver Reservoir	2/26	21	5.1	18.0	9.2
Beaver Reservoir (Alt.)	2/26	24	5.8	20.0	- -
Big Sheep[e]	2/27	58	19.1	27.6	21.2[m]
Blue Mtn. Summit	2/26	22	5.3	11.4	7.2
Bourne	2/22	36	9.9	19.3	13.7
County Line	2/27	8	2.2	8.3	5.4
Dooley Mountain	2/22	24	7.1	12.0	7.2
Eilertson Meadows	2/23	25	6.4	14.3	9.7
Eldorado Pass	2/27	11	3.1	3.2	2.7[h]
Gold Center	2/22	32	8.8	15.3	11.1
Goodrich Lake	2/27	65	25.4	57.5	27.9[h]
Intake House	2/23	27	7.0	14.4	- -
Little Alps	2/28	27	7.0	23.0	11.2[h]
Little Antone	2/28	15	3.9	11.0	- -
Lucky Strike	2/27	26	7.5	22.5	10.7[h]
Lucky Strike Pillow*	2/27	-	6.8	13.2	- -
Meacham	2/26	14	3.6	18.5	8.9
Mirror Lake[e]	2/27	132	46.2	- -	56.5[m]
Moss Spring	2/26	43	12.8	31.8	19.9
Power Plant	2/23	13	3.5	8.8	- -
Schneider Meadows	2/26	81	26.5	32.5	26.4
Schoolmarm	2/27	7	2.0	6.0	4.6
Standley[e]	2/27	68	22.4	35.3	24.3[m]
Taylor Green	2/26	37	10.6	22.0	14.4[h]
Tipton	2/26	28	7.4	13.6	8.9
Tipton Snow Pillow*	2/26	-	8.3	- -	- -
Tollgate	2/27	35	12.0	38.2	21.5
TV Ridge[e]	2/27	34	10.2	22.0	- -

*Manometer reading.

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	2/28	17	5.0	17.9	9.6
Arbuckle Mtn. Pillow*	2/28	-	15.4	31.4	- -
Battle Mountain Summit	2/26	0	0.0	6.8	1.8[m]
Blue Mountain Camp	2/27	13	5.6	27.4	12.3[h]
Butte Creek Summit	[c]			- -	- -
Emigrant Springs	2/26	T	T	11.3	4.4
High Ridge Pillow*	2/27	-	20.5	41.8	- -
Lucky Strike	2/27	26	7.5	22.5	10.7[h]
Lucky Strike Pillow*	2/27	-	6.8	13.2	- -
Meacham	2/26	14	3.6	18.5	8.9
Tollgate	2/27	35	12.0	38.2	21.5
Weston Mountain	2/27	0	0.0	0.0	T[m]

*Manometer Reading

BASIC DATA SUPPLEMENT 1

MARCH 1, 1973

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	2/28	48	15.5	34.5	22.2
Arbuckle Mountain	2/28	17	5.0	17.9	9.6
Arbuckle Mtn. Pillow*	2/28	-	15.4	31.4	- -
Battle Mountain Summit	2/26	0	0.0	6.8	1.8[m]
Beech Creek Summit	2/28	10	3.7	8.1	4.4
Blue Mountain Springs	2/27	36	11.2	20.8	13.7
Blue Mtn. Springs Pillow*	2/27	-	9.8	16.3	- -
Blue Mountain Summit	2/26	23	5.3	11.4	7.2
Butte Creek Summit	[c]			- -	- -
Derr	2/23	24	6.6	15.4	8.3[h]
Gold Center	2/22	32	8.8	15.3	11.1
Indian Creek Butte[e]	2/23	60	18.6	31.9	19.3[m]
Izee Summit	2/26	20	5.6	9.9	7.2
Lucky Strike	2/27	26	7.5	22.5	10.7[h]
Lucky Strike Pillow*	2/27	-	6.8	13.2	- -
Marks Creek	2/27	0	0.0	4.5	2.9
Ochoco Meadows	2/28	19	5.6	12.1	8.1
Olive Lake[e]	2/27	33	9.2	25.0	16.5
Schoolmarm	2/27	7	2.0	6.0	4.6
Snow Mountain	2/27	34	9.5	19.2	11.0[h]
Snow Mtn. Pillow**	3/1	-	7.9	15.7	- -
Starr Ridge	2/28	10	2.8	9.4	4.9
Tipton	2/26	28	7.4	13.6	8.9
Tipton Snow Pillow*	2/26	-	8.3	- -	- -
Williams Ranch	2/28	0	0.0	3.0	1.3[m]
*Manometer reading.					
**Telemetry reading.					
UPPER DESCHUTES, CROOKED WATERSHEDS					
Bald Peter	3/1	48	14.6	- -	- -
Caldwell Ranch	3/1	16	4.9	10.4	11.5[h]
Cascade Summit	2/28	39	13.7	39.4	24.0
Chemult	2/27	20	6.4	10.6	9.7
Chemult Alternate	2/27	24	7.6	- -	- -
Derr	2/23	24	6.6	15.4	8.3[h]
Hogg Pass	3/1	40	13.0	62.8	33.1
Hungry Flat	2/27	0	0.0	7.4	5.3
Irish-Taylor Pillow**	[b]			61.3	32.6
Marks Creek	2/27	0	0.0	4.5	2.9
New Crescent Lake	2/27	19	5.9	15.4	12.9
New Dutchman Flat #2	2/27	68	27.4	75.1	43.3
Ochoco Meadows	2/28	19	5.6	12.1	8.1
Racing Creek	3/1	20	5.1	- -	- -
Snow Mountain	2/27	34	9.5	19.2	11.0[h]
Snow Mountain Pillow**	3/1	-	7.9	15.7	- -
Tamarack	2/26	11	3.2	6.8	4.8
Tangent	2/27	36	12.9	32.4	19.8
Three Creek Butte	2/26	12	4.2	15.6	9.4[h]
Three Creek Meadow	2/26	22	6.3	23.3	16.0
Three Creek Mdw. Pillow**	3/1	-	9.7	25.0	- -
Waldo Lake	3/1	39	14.1	47.6	25.5[h]
Willamette Pass	2/28	0	0.0	53.8	33.7[h]
Willamette Pass Pillow**	[b]			- -	- -
**Telemetry reading.					

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadows	2/22	13	3.5	16.9	9.6[h]
Clear Lake	2/23	7	2.0	16.1	8.2
Clear Lake (Experimental)	2/23	20	5.8	22.8	14.5
Cooper Spur #2	3/2	16	5.5	13.7	9.8[m]
Greenpoint	2/28	18	5.9	15.7	12.5
Knebal Springs	2/22	10	3.5	10.8	6.2[h]
Parkdale	3/2	0	0.0	T	- -
Phlox Point	2/26	58	23.6	93.5	49.5
Red Hill	2/26	42	14.4	62.6	31.0
Still Creek	2/23	24	7.7	35.4	18.4
Still Cr. Alt. #2	2/23	27	9.0	36.5	- -
Switchback	2/26	18	7.0	15.6	11.5[m]
Tilly Jane	2/24	44	14.0	58.1	32.6
Ulrich Ranch Junction	2/22	9	3.4	2.0	2.1[m]
Umbrella Falls	3/1	76	26.0	101.2	- -
Upper Valley	3/2	0	0.0	1.0	- -
WILLAMETTE WATERSHEDS					
Cascade Summit	2/28	39	13.7	39.4	24.0
Champion	2/27	29	11.0	40.6	21.9
Clackamas Lake	2/26	9	3.4	17.4	10.0
Clear Lake	2/23	7	2.0	16.1	8.2
Clear Lake (Expt.)	2/23	20	5.8	22.8	14.5[h]
Dead Horse Grade	2/27	14	6.2	24.5	15.2
Detroit (Town)	3/1	0	0.0	2.3	0.5
Detroit Dam	3/1	0	0.0	T	0.5
Golden Curry Creek	2/27	0	0.0	9.6	4.7
Hogg Pass	3/1	40	13.0	62.8	33.1
Lake Harriet	3/1	0	0.0	- -	1.6[m]
Laurel Mountain	2/28	0	0.0	14.2	- -
Layng Creek	2/27	0	0.0	0.0	T
Lookout Point Dam	2/28	0	0.0	0.0	0.0
Lost Creek Ranch	2/27	0	0.0	6.4	3.0[h]
Lund Park	2/27	0	0.0	0.0	0.2
Marion Forks	3/1	7	2.2	17.5	11.2[h]
Marys Peak	2/27	2	0.5	22.9	9.0[m]
Marys Peak (Alt.)	2/27	1	0.4	18.9	- -
McCredie Springs	2/28	0	0.0	0.0	0.2
McKenzie	2/27	46	17.8	71.8	35.1
McKenzie Bridge	2/27	0	0.0	0.0	0.2
Mill City	3/1	0	0.0	0.0	0.0
Oakridge	2/28	0	0.0	0.0	T
Peavine Ridge Pillow**	3/1	-	4.6	29.7	- -
Phlox Point	2/26	58	23.6	93.5	49.5
Railroad Overpass	2/28	0	0.0	0.0	2.4
Saddle Mountain Pillow**	[b]			22.2	- -
Salt Creek Falls	2/28	10	3.7	21.5	12.8
Santiam Junction	3/1	18	5.8	38.9	19.2
Seine Creek Pillow**	[b]			2.2	- -
Still Creek	2/23	24	7.7	35.4	18.4
Still Creek Alt. #2	2/23	27	9.0	36.5	- -
Timothy Lake	3/1	14	4.1	22.4	9.6[m]
Valsetz Summit	2/28	0	0.0	0.0	- -
Vida	2/27	0	0.0	0.0	0.0
Waldo Lake	3/1	39	14.1	47.6	25.5[h]
Weaver Creek	2/27	0	0.0	T	0.8
White Branch Slide	2/27	0	0.0	10.6	5.3
Whitewater Bridge	3/1	0	0.0	7.8	3.4
Willamette Pass	2/28	56	20.1	53.8	33.7[h]
Willamette Pass Pillow**	[b]			- -	- -
**Telemetry reading.					

BASIC DATA SUPPLEMENT 1

MARCH 1, 1973

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
ROGUE, UMPQUA WATERSHEDS					
Althouse	2/27	13	5.7	6.1	6.0
Althouse #2	2/27	12	5.0	8.7	- -
Annie Spring	2/26	85	30.2	45.3	36.3
Beaver Dam Creek	2/27	22	8.5	21.0	9.6
Big Red Mountain	2/22	54	18.5	31.5	26.6
Billie Creek Divide	2/22	40	13.6	30.6	18.4
Caliban	2/28	66	20.8	41.2	- -
Champion	2/27	29	11.0	40.6	21.9
Cold Springs Camp	2/22	61	21.2	41.0	27.5[h]
Cold Springs Camp Pillow**	3/1	-	19.4	34.5	- -
Deadwood Junction	2/27	14	6.2	11.3	8.7[h]
Diamond-Crater Summit	2/23	56	18.6	48.3	30.5[h]
Diamond-Crater Sum. Alt.	2/23	51	17.0	42.7	- -
Diamond Lake	2/23	31	10.2	23.5	18.5
Fish Lake	2/22	24	9.1	16.6	11.7[h]
Fourmile Lake	2/27	46	19.0	29.8	20.6[m]
Grayback Peak	2/21	35	11.7	25.3	24.9
Howard Prairie Reservoir	2/27	16	6.1	10.2	8.4[h]
Hyatt Prairie	2/27	11	3.9	8.5	7.4[h]
King Mountain #1	2/27	11	3.7	9.6	- -
King Mountain #2	2/27	5	1.5	6.6	- -
King Mountain #3	2/27	0	0.0	1.4	- -
King Mountain #4	2/27	0	0.0	0.0	- -
King Mountain #5	2/27	0	0.0	0.0	- -
King Mountain #6	2/27	0	0.0	0.0	- -
Little Red Mountain	2/22	34	11.8	29.9	21.6
Mt. Ashland Switchback	2/28	68	21.3	34.7	- -
Mule Creek	2/27	0	0.0	13.5	- -
North Umpqua	3/2	15	5.0	20.5	12.0[h]
Page Mountain	2/27	0	0.0	2.4	4.3[h]
Park Headquarters	2/26	100	37.0	66.9	47.5
Red Butte #1	2/26	11	3.7	18.5	10.8[h]
Red Butte #2	2/26	5	1.9	8.2	7.2[h]
Red Butte #3	2/26	0	0.0	3.5	7.2[h]
Red Butte #4	2/26	0	0.0	0.8	2.4[h]
Red Butte #5	2/26	0	0.0	0.0	T[m]
Red Butte #6	2/26	0	0.0	0.0	0.0
Seven Lakes #2	2/27	67	24.4	57.3	32.1[h]
Seven Mile	2/28	62	21.4	38.0	- -
Silver Burn	2/26	13	5.5	16.8	11.3
Siskiyou Summit	2/23	T	T	5.2	5.7
Siskiyou Summit Alt. #2	2/23	7	2.4	6.5	- -
Ski Bowl Road	2/28	50	16.0	27.8	- -
South Fork Canal	2/26	0	0.0	1.5	1.7
Trap Creek	3/2	12	4.2	15.4	10.0[h]
Whaleback	2/28	50	17.7	38.3	27.5

*Manometer reading.
**Telemetry reading.

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR Date of Survey	Snow Depth (In.)	Water Cont. (In.)	PAST REC. Water Content (inches) Last Yr.	Ave.[i]
KLAMATH WATERSHEDS					
Annie Spring	2/26	83	30.2	45.3	36.3
Billie Creek Divide	2/22	40	13.6	30.6	18.4
Chemult	2/27	20	6.4	10.6	9.7
Chemult (Alternate)	2/27	24	7.6	- -	- -
Chiloquin (PP&L)	[b]			- -	0.5
Cold Springs Camp	2/22	61	21.2	41.0	27.5[h]
Cold Springs Camp Pillow**	3/1	-	19.4	34.5	- -
Crazyman Flat[e]	2/23	18	5.4	13.3	7.7[m]
Crowder Flat[e] (Calif.)	2/23	4	1.2	2.1	2.0[m]
Crystal (PP&L)	[b]			6.0	7.6
Diamond-Crater Summit	2/23	56	18.6	48.3	30.5[h]
Diamond-Crater Sum. Alt.	2/23	51	17.0	42.7	- -
Diamond Lake Jct. (97)	2/23	12	3.8	5.0	6.2[h]
Dog Hollow[e]	2/23	0	0.0	0.0	0.4[m]
Finley Corrals[e]	2/23	42	12.6	25.2	12.6
Fort Klamath (PP&L)	[b]			0.0	3.1
Fourmile Lake	2/27	46	19.0	29.8	20.6[h]
Gerber	3/1	T	T	- -	1.8[h]
Harriman (PP&L)	2/26	8	2.8	- -	2.7[m]
Hyatt Prairie Reservoir	2/27	11	3.9	8.5	7.4[h]
Kirk (PP&L)	[b]			5.4	5.5[m]
Lake of the Woods	2/27	14	5.0	13.4	10.7
Park Headquarters	2/26	100	37.0	66.9	47.5
Quartz Mountain	2/28	12	4.4	7.5	5.8
Quartz Mountain (Ext.)	2/28	12	4.4	7.9	- -
Seven Lakes #2	2/27	67	24.4	57.3	32.1[h]
Seven Mile	2/28	62	21.4	38.0	- -
State Line[e] (Calif.)	2/23	22	6.6	11.2	7.5[m]
Strawberry	2/28	23	6.8	11.7	6.6[h]
Strawberry[e]	2/23	15	4.5	9.1	- -
Summer Rim	3/5	36	10.1	17.8	13.8
Summer Rim[e]	2/23	34	10.2	18.3	- -
Summer Rim Pillow*	3/5	-	8.9	- -	- -
Sycan Flat[e]	2/23	8	2.2	11.9	5.9[m]
Taylor Butte	2/26	8	2.4	4.9	5.3[h]
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	2/28	35	10.8	18.6	9.5
Bald Mountain (Nev.)	2/28	14	3.9	5.4	3.1
Bear Flat Meadow[e]	2/23	27	8.1	14.0	8.2[m]
Camas Creek	2/28	24	6.8	14.7	9.5
Cedar Pass (Calif.)	2/28	39	11.7	24.4	12.3
Colvin Creek[e]	2/23	8	2.4	8.4	- -
Cox Flat[e]	2/23	22	6.6	14.0	6.5[m]
Crowder Flat[e] (Calif.)	2/23	4	1.2	2.1	2.0[m]
Dismal Swamp[e] (Calif.)	2/23	52	15.6	21.7	13.4[m]
Finley Corrals[e]	2/23	42	12.6	25.2	12.6[m]
Hart Mountain[e]	2/23	6	1.7	1.7	1.6[m]
Little Bally Mtn.[e] (Nev.)	2/23	12	3.6	3.5	2.1[m]
North Star (Calif.)	[c]				
Patton Meadows[e]	2/23	46	13.8	25.2	12.6[m]
Quartz Mountain	2/28	12	4.4	7.5	5.8
Quartz Mountain (Ext.)	2/28	12	4.4	7.9	- -
Sherman Valley[e]	2/23	28	8.4	19.6	10.0[m]
Silver Creek	2/27	3	0.9	2.1	2.9
State Line[e] (Calif.)	2/23	22	6.6	11.2	7.5[h]
Strawberry	2/28	23	6.8	11.7	6.6[h]
Strawberry[e]	2/23	15	4.5	9.1	- -
Summer Rim	3/5	36	10.1	17.8	13.8
Summer Rim Pillow*	3/5	-	8.9		
Summer Rim[e]	2/23	34	10.2	18.3	- -
Sycan Flat[e]	2/23	8	2.2	11.9	5.9[m]
Willow Creek[e]	2/23	8	2.4	8.4	3.2[m]

BASIC DATA SUPPLEMENT 1

MARCH 1, 1973

SNOW	THIS YEAR			PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr.	Ave.[i]
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	2/27	36	11.2	20.8	13.7
Blue Mtn. Springs Pillow*	2/27	-	9.8	16.3	- -
Buck Pasture[e]	2/23	6	1.6	0.0	2.3[m]
Buckskin Lake[e]	2/23	0	0.0	0.0	0.2[m]
Call Meadows[e]	2/23	12	3.4	2.1	3.5[m]
Delintment Lake	2/27	20	5.0	11.0	6.5
Denio Creek[e]	2/23	3	0.8	0.0	0.5[m]
Disaster Peak (Nev.)	2/26	41	12.5	15.7	12.6
Emigrant Butte	2/28	3	1.1	3.5	4.1[h]
Fish Creek	2/23	60	20.7	31.3	19.6[h]
Fish Creek Pillow*	2/23	60	23.5	33.1	- -
Hart Mountain[e]	2/23	6	1.7	1.7	1.6[m]
Idlewild Camp	2/28	8	2.0	8.2	4.6
Idlewild Camp Alt.	2/28	4	1.3	6.4	- -
Izee Summit	2/26	20	5.6	9.9	7.2
Lake Creek R. S.	2/27	26	7.1	13.6	9.2
Oregon Canyon[e]	2/23	26	7.5	4.2	5.2[h]
Rock Spring	2/26	17	4.3	7.2	4.8
Silvies	2/23	28	9.3	18.9	10.7[h]
Silvies Pillow*	2/23	-	12.1	28.6	- -
Silvies[e]	2/23	21	6.9	12.6	7.8[m]
Snow Mountain	2/27	34	9.5	19.2	11.0[h]
Snow Mountain Pillow**	3/1	-	7.9	15.7	- -
Starr Ridge	2/28	10	2.8	9.4	4.9
Stinking Water	2/26	5	2.2	T	2.7[h]
Trout Creek[e]	2/23	34	10.2	5.6	6.3[m]
"V" Lake[e]	2/23	21	6.5	11.5	3.6[m]

*Manometer reading.
**Telemetry reading.

SNOW	THIS YEAR			PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr.	Ave.[i]

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953–67 adjusted average. (i) 1953–67, 15 year average. (j) Telephonic report – data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average or 5 or more years in base period.

BASIC DATA SUPPLEMENT 2

MARCH 1, 1973

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average [i]
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	3/2	10.4	11.0	10.6
Big Bend (Nev.)	6700	48	16.7	2/27	12.9	13.9	15.4[h]
Blue Mountain Spring	5900	42	16.9	2/27	6.4	6.5	10.1
Crane Prairie	5375	48	18.2	2/27	14.8	15.2	15.9
Folly Farm	4450	30	12.5	[b]			
Jack Creek, Lower (Nev.)	6800	48	8.6	[b]			
Jordan Valley	4390	48	19.3	2/26	15.4	16.6	15.7
Mud Flat (Ida.)	5500	48	12.8	2/28	11.0	14.0	11.4
Rodeo Flat (Nev.)	6800	42	11.0	2/26	9.0	6.1	10.6[h]
Taylor Canyon (Nev.)	6200	48	15.1	2/23	9.5	8.7	13.0[h]
Triangle (Ida.)	5150	48	16.6	[b]			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	2/26	9.3	9.6	10.8
Dooley Mountain	5430	36	9.2	2/22	3.5	2.8	3.9
Emigrant Springs	3925	48	22.3	2/26	18.9	19.5	19.4
Ladd Summit	3730	48	18.9	2/28	10.4	11.2	10.5
Moss Springs	5850	36	25.8	2/26	14.2	14.2	- -
Tollgate	5070	48	23.6	2/27	14.3	16.1	20.1
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/26	12.8	13.8	13.0
Emigrant Springs	3925	48	22.3	2/26	18.9	19.5	19.4
Tollgate	5070	48	23.6	2/27	14.3	16.1	20.1
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/26	12.8	13.8	13.0
Beech Creek	4800	48	21.3	2/28	15.1	11.6	13.5
Blue Mountain Spring	5900	42	16.9	2/27	6.4	6.5	10.1
Blue Mountain Summit	5100	36	16.8	2/26	9.3	9.6	10.8
Derr	5670	24	9.0	2/23	6.6	8.3	8.2
Marks Creek	4540	36	14.1	[b]		13.4	11.3
Snow Mountain	6300	48	16.7	2/28	12.1	12.7	13.8
Starr Ridge	5150	36	10.6	2/28	9.3	10.6	9.6
Williams Ranch	4500	42	17.9	2/28	17.6	17.9	17.1
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	2/23	6.6	8.3	8.2
Marks Creek	4540	36	14.1	[b]		13.4	11.3
Snow Mountain	6300	48	16.7	2/28	12.1	12.7	13.8
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	2/23	14.2	14.2	- -
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	2/28	7.6	8.3	8.4

BASIC DATA SUPPLEMENT 2

MARCH 1, 1973

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average [i]
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	2/28	12.6	12.8	12.4
Quartz Mountain	5230	48	15.3	2/28	7.6	8.3	8.4
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	2/27	6.4	6.5	10.1
Fish Creek	7900	48	15.0	2/23	13.1	- -	10.1
Folly Farm	4450	30	12.5	[b]			
Silvies	6900	48	16.4	2/23	16.0	13.7	12.9
Snow Mountain	6300	48	16.7	2/18	12.1	12.7	13.8
Starr Ridge	5150	36	10.6	2/28	9.3	10.6	9.6
Willow-Bald	5000	24	6.6	2/28	5.5	4.7	5.2

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953–67 adjusted average. (i) 1953–67, 15 year average. (j) Telephonic report – data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 3

MARCH 1, 1973

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precip-itation	Last Year	Average[i]
Allison Work Center (Harney County)	5320	1/31 to 2/27/73	1.50		
Althouse (Josephine County)	4530	1/30 to 2/27/73	3.37		
Arbuckle Mountain (Morrow County)	5400	1/31 to 2/28/73	2.13		
Brooks Meadow (Hood River County)	4520	9/22/72 to 2/22/73	19.13		
Camas Creek (Lake County)	5825	1/31 to 2/28/73	2.50	3.40	
County Line (Umatilla County--Starkey Hdqs.)	4800	1/31 to 2/27/73	0.23	1.30	
Derr (Wheeler County)	5800	1/31 to 2/23/73	1.00		
Fish Lake (Jackson County)	4865	1/29 to 2/22/73	0.12		
Lucky Strike (Umatilla County)	5050	1/30 to 2/27/73	2.20		
Quartz Mtn. Summit (Lake County)	6300	1/30 to 2/28/73	2.00	3.34	
Silver Creek (Lake County)	4900	1/29 to 2/27/73	1.02	4.22	
Strawberry (Lake County)	5760	1/27/73 to 2/28/73	2.20		
Taylor Butte (Klam ath County	5040	12/27/72 to 2/27	4.72		
Tipton (Baker County)	5100	1/30/73 to 2/26/73	0.25	1.69	

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953–67 adjusted average. (i) 1953–67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

Map and Index to OREGON SNOW COURSES

ASSISTANT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND OREG 1973 M7-0-22026-L

OWYHEE, MALHEUR WATERSHEDS (4)

Owyhee River

NAME	LOCATION SEC	TWP	RGE	ELEV
Antelope Ridge (Ida)	20	8S	1E	5900
Battle Creek (Ida)	20	11S	1E	5700
Bear Creek (Nev)	31	46N	58E	7800
Big Bend (Nev)	30	45N	56E	6700
Blue Mtn Pass (Nev)	31	37S	42E	5290
Bucksikin, Lower (Nev)	25	45N	59E	6700
Bucksikin, Upper (Nev)	11	45N	59E	7200
Bull Basin (Ida)	25	12S	5W	5600
Columbia Basin (Nev)	31	44S	53E	6650
Disaster Peak (Nev)	8	47N	34E	6500
Fawn Creek	2	45N	52E	7000
Fish Creek	4	33S	33E	6500
Folly Farm Summit	4	30S	58E	4450
Fox Creek (Nev)	33	46N	58E	6800
Fry Canyon (Nev)	31	43N	54E	6700
Gold Creek (Nev)	31	45N	56E	6600
Granite Peak (Nev)	22	44N	39E	7800
Hyde Pasture (Ida)	31	8S	2W	5800
Jack Creek, Lower (Nev)	18	42N	53E	6800
Jack Creek, Upper (Nev)	2	42N	53E	7250
Jack Peak (Nev)	28	42S	53E	8420
Jordan Valley (Nev)	2	30S	46E	4390
Laurel Draw	20	45N	53E	6700
Lookout Butte	5	40S	47E	5650
Louse Canyon (Nev)	27	42S	44E	6440
Martin Creek (Nev)	18	44N	40E	6700
Merritt Mountain (Nev)	10	46N	54E	7000
Midas (Nev)	18	39N	46E	7200
Mud Flat (Ida)	34	9S	2W	5500
Oregon Canyon	8	40S	40E	6950
Quinn Ridge (Nev)	9	47N	41E	6300
Red Canyon (Ida)	32	11S	4W	6650
Rodeo Flat (Nev)	36	43N	53E	6800
76 Creek (Nev)	6	44N	58E	7100
Silver City (Ida)	6	5S	3W	6400
Silvies	35	32S	33E	6900
South Mountain No.2 (Ida)	10	8S	5W	6340
Stag Mountain (Nev)	32	41N	58E	7800
Succor Creek (Ida)	25	3S	5W	6100
Taylor Canyon (Nev)	35	39N	53E	6200
Toe Jam (Nev)	29	40N	50E	7700
Tremewan Ranch (Nev)	9	39N	55E	5700
Triangle (Ida)	25	7S	3W	5150
Trout Creek	10	41S	36E	7800
"V" Lake	31	35½S	32½E	6600
Vaught Ranch (Ida)	10	11S	1W	5950
War Eagle (Ida)	20	5S	3W	7700

Malheur River

NAME	LOCATION SEC	TWP	RGE	ELEV
Blue Mountain Springs	21	15S	35E	5900
Buck Pasture	28	29S	35E	5300
Bully Creek	11	17S	37E	5300
Call Meadows	29	20S	33E	5340
Cottonwood-Indian	3	19S	39E	4320
Crane Prairie	24	16S	34E	5375

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

NAME	LOCATION SEC	TWP	RGE	ELEV
Arbuckle Mountain	33	4S	29E	5400
Battle Mountain Summit	29	3S	31E	4340
Emigrant Springs	29	1N	35E	3925
High Ridge Pillow	31	3N	38E	4980
Lucky Strike	28	3S	32E	5050
Meacham	24	1S	35E	4300
Meacham Snow Pillow	35	1S	35E	4150
Tollgate	32	4N	38E	5070

Walla Walla River

NAME	LOCATION SEC	TWP	RGE	ELEV
Blue Mountain Camp	35	4N	37E	4300
Tollgate	32	4N	38E	5070
Weston Mountain	25	4N	35E	2700

LEGEND

1902	SNOW COURSE ONLY
1902ıs	SNOW COURSE AND SOIL MOISTURE
1902mA	SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
1902A	SNOW COURSE AND AERIAL MARKER
1902m	SOIL MOISTURE ONLY
1902a	AERIAL MARKER ONLY
1902P	SNOW COURSE AND PRECIPITATION GAGE
1902p	PRECIPITATION GAGE ONLY
	RADIO TELEMETRY

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS (2)

Burnt River

NAME	LOCATION SEC	TWP	RGE	ELEV
Blue Mountain Summit	6	12S	36E	5098
Cooley Mountain	32	11S	40E	5430
Eldorado Pass	20	14S	38E	4600
Gold Center	21	9S	36E	5340
Tipton	34	10S	35E	5100

Powder River

NAME	LOCATION SEC	TWP	RGE	ELEV
Anthony Lake	18	7S	37E	7125
Bourne	33	8S	37E	5800
Cooley Mountain	32	11S	40E	5430
Eilertson Meadows	18	8S	38E	5400
Gold Center	21	9S	36E	5340
Goodrich Lake	4	9S	38E	6775
Intake House	5	8S	38E	4930
Ladd Summit	5	5S	39E	3730
Little Alps	10	7S	37E	6200
Little Antone	1	7S	37E	5000
Power Plant	33	7S	38E	3990
Taylor Green	3	6S	42E	5740

Pine Creek

NAME	LOCATION SEC	TWP	RGE	ELEV
Schneider Meadows	35	6S	45E	5400

Grande Ronde River

NAME	LOCATION SEC	TWP	RGE	ELEV
Aneroid Lake No. 1	16	4S	45E	7480
Aneroid Lake No. 2	16	4S	45E	7300
Anthony Lake	18	7S	37E	7125
Bald Mountain	14 & 15	4S	41E	6700
Beaver Reservoir	8	5S	37E	5150
County Line	28	4S	34E	4800
Lucky Strike	28	3S	32E	5050
Meacham	24	1S	35E	4300
Meacham Snow Pillow	35	1S	35E	4150
Mirror Lake	34	4S	44E	8200
Moss Spring	28	3S	41E	5850
Schoolmarm	28	4S	34E	4775
Standley	21	2S	42E	7400
Taylor Green	3	6S	42E	5740
Tollgate	32	4N	38E	5070
TV Ridge No. 2	12	2S	43E	7000

Imnaha River

NAME	LOCATION SEC	TWP	RGE	ELEV
Aneroid Lake No. 1	16	4S	45E	7480
Aneroid Lake No. 2	16	4S	45E	7300
Big Sheep	33	4S	46E	6200

Willow Creek

NAME	LOCATION SEC	TWP	RGE	ELEV
Arbuckle Mountain	33	4S	29E	5400
Anthony Lake	18	7S	37E	7125

UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

NAME	LOCATION SEC	TWP	RGE	ELEV
Arbuckle Mountain	33	4S	29E	5400
Battle Mountain Summit	29	3S	31E	4340
Beech Creek Summit	32 & 33	11S	30E	4650
Blue Mountain Springs	21	15S	35E	5900
Blue Mountain Summit	6	12S	36E	5098
Derr	14	13S	23E	5670
East Fork Canyon	15	15S	32E	5700
Gold Center	21	9S	36E	5340
Indian Cr. Butte	5	15S	33E	6550
Izee Summit	28	16S	29E	5293
Lucky Strike	28	3S	32E	5050
Marks Creek	25	12S	19E	4540
Ochoco Meadows	21	13S	20E	5200
Olive Lake	14	9S	34E	6000
Schoolmarm	28	4S	34E	4775
Snow Mountain	1	19S	26E	6220
Starr Ridge	20	15S	31E	5150
Tipton	34	10S	35½E	5100
Williams Ranch	20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

NAME	LOCATION SEC	TWP	RGE	ELEV
Caldwell Ranch	30	21S	8E	4400
Cascade Summit	7	23S	6E	4880
Chemult	21	27S	8E	4760
Hogg Pass	24	13S	7½E	4755
Hungry Flat	29	18S	11E	4400
Irish-Taylor	25	20S	6E	5500
New Crescent Lake	11	24S	6E	4800
New Outchman Flat #2	21	18S	9E	6400
Tangent	28	18S	10E	5400
Three Creeks Butte	27	16S	9E	5200
Three Creeks Meadows	34	16S	9E	5650
Waldo Lake	15	21S	6E	5600
Willamette Pass	33	24S	5½E	5600

Crooked River

NAME	LOCATION SEC	TWP	RGE	ELEV
Derr	14	13S	23E	5670
Marks Creek	25	12S	19E	4540
Ochoco Meadows	21	13S	20E	5200
Snow Mountain	1	19S	26E	6220
Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS (6)

Hood River

NAME	LOCATION SEC	TWP	RGE	ELEV
8rooks Meadows	2	2S	10E	4300
Cooper Spur	6	2S	10E	3490
Greenpoint Reservoir	27	2N	9E	3200
Knebal Springs	31	1S	11E	3850
Parkdale	5	1S	10E	1770
Phlox Point	7	3S	9E	5400
Red Hill	20	1S	9E	4400
Still Creek	25	3S	8½E	3670
Switchback	28	1S	9E	3255
Tilly Jane	15	2S	9E	6000
Ulrich Ranch Junction	28	1S	11E	3350
Umbrella Falls	3	3S	9E	5400
Upper Valley	20	1S	10E	2530

Mile Creeks - Masier Creek

NAME	LOCATION SEC	TWP	RGE	ELEV
8rooks Meadows	2	2S	10E	4300
Knebal Springs	31	1S	11E	3850
Ulrich Ranch Junction	28	1S	11E	3350

Lower Deschutes River

NAME	LOCATION SEC	TWP	RGE	ELEV
Clear Lake	29	4S	9E	3500
Clear Lake Experimental	29	4S	9E	3500
Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

NAME	LOCATION SEC	TWP	RGE	ELEV
Phlox Point	7	3S	9E	5400
Still Creek	25	3S	8½E	3670

WILLAMETTE WATERSHEDS (8)

Clackomas River

NAME	LOCATION SEC	TWP	RGE	ELEV
Clackamas Lake	35	5S	8½E	3400
Clear Lake	29	4S	9E	3500
Lake Harriet	4	6S	7E	2045
Peavine Ridge	14 & 15	6S	7E	3500
Phlox Point	7	3S	9E	5400
Still Creek	25	3S	8½E	3670
Timothy Lake	26	5S	8E	3295

Santiom River

NAME	LOCATION SEC	TWP	RGE	ELEV
Detroit (City)	1	10S	5E	1610
Detroit Dam	7	10S	5E	1500
Hogg Pass	24	13S	7½E	4755
Marion Forks	29	11S	7E	2600
Mill City	29	9S	3E	826
Santiam Junction	14	13S	7E	3750
Whitewater Bridge	20	10S	7E	2175

McKenzie River

NAME	LOCATION SEC	TWP	RGE	ELEV
Dead Horse Grade	13	16S	7E	3700
Lost Creek Ranch	19	16S	7E	1956
McKenzie	35	15S	7½E	4800
McKenzie Bridge	13	16S	5E	1372
Vida	28	16S	2E	800
White Branch Slide	15	16S	7E	2700

Middle Fork Willamette River

NAME	LOCATION SEC	TWP	RGE	ELEV
Cascade Summit	7	23S	6E	4880
Lookout Point Dam	13	19S	1W	750
McCredie Springs	36	21S	4E	2120
Oakridge	16	21S	3E	1310
Railroad Overpass	21	22S	5E	2250
Salt Creek Falls	32	22S	5½E	4000
Waldo Lake	15	24S	6E	5600
Willamette Pass	33	24S	5½E	5600

Coast Fork Willamette River

NAME	LOCATION SEC	TWP	RGE	ELEV
Champion	12	23S	1E	4500
Golden Curry Creek	1	23S	1E	3136
Layng Creek R.S.	31	21S	1E	1200
Lund Park	22	22S	1E	1740
Weaver Creek	35	22S	1E	2440

Mory's River

NAME	LOCATION SEC	TWP	RGE	ELEV
Mary's Peak	21	12S	7W	3620

Luckiomute River

NAME	LOCATION SEC	TWP	RGE	ELEV
Laurel Mountain	6	8S	7W	3000
Valsetz Summit	3	9S	7W	2600

Tualotin River

NAME	LOCATION SEC	TWP	RGE	ELEV
Seine Creek	34	1N	5W	2000
Saddle Mountain	25	1N	6W	3250

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

NAME	LOCATION SEC	TWP	RGE	ELEV
Althouse	17	41S	7W	4530
Annie Spring	19	31S	6E	6018
Beaver Dam Creek	1	38S	4E	5100
Big Red Mountain	31	40S	1W	6250
Billie Creek Olvide	30	36S	5E	5300
Caliban	16	40S	1E	6500
Deadwood Junction	8	38S	4E	4600
Diamond-Crater Summit	34	28S	6E	5800
Fish Lake	3	37S	4E	4665
Fourmile Lake	9	36S	5E	6000
Grayback Peak	9	40S	5W	6000
Howard Prairie	32	38S	4E	4500
Hyatt Prairie Reservoir	15	39S	3E	4900
Little Red Mountain	25	40S	2W	6500
Mt. Ashland Switchback	15	40S	1E	6400
Mule Creek	8	32S	9W	3680
Page Mountain	5	41S	7W	4045
Park Headquarters	8	31S	6E	6550
Seven Lakes No. 2	26	33S	5E	6200
Silver Burn	30	30S	4E	3720
Siskiyou Summit	17	40S	2E	4630
Ski Bowl Road	22	40S	1E	6000
South Fork Canal	12	33S	3E	3500
Whaleback	4	31S	2E	5025

Umpqua River

NAME	LOCATION SEC	TWP	RGE	ELEV
Champion	12	23S	1E	4500
Diamond Lake	29	27S	6E	5315
King Mountain No. 1	5	33S	4W	4500
King Mountain No. 2	4	33S	4W	4000
King Mountain No. 3	33	32S	4W	3648
King Mountain No. 4	33	32S	4W	3049
King Mountain No. 5	29 & 28	32S	4W	2380
King Mountain No. 6	20	32S	4W	1820
North Umpqua	19	26S	6E	4215
Red Butte No. 1	36	27S	2W	4560
Red Butte No. 2	30	27S	1W	4000
Red Butte No. 3	30	27S	1W	3500
Red Butte No. 4	30	27S	1W	3000
Red Butte No. 5	20	27S	1W	2500
Red Butte No. 6	17	27S	1W	2000
Trap Creek	1	27S	4E	3800
Whaleback	4	31S	2E	5025

KLAMATH WATERSHEDS (10)

Klomoth River

NAME	LOCATION SEC	TWP	RGE	ELEV
Annie Spring	19	31S	6E	6018
Billie Creek Olvide	30	36S	5E	5300
Chemult	21	27S	8E	4760
Cold Springs Camp	12	35S	5E	6100
Crazyman Flat	9	34S	15E	6100
Crowder Flat (Cal)	30	47N	11E	5200
Diamond-Crater Summit	34	28S	6E	5800
Diamond Lake Jct. (97)	1	29S	7E	4600
Dog Hollow	1	40S	14E	4900
Finley Corrals	11	36S	16E	6000
Fourmile Lake	9	36S	5E	6000
Gerber	12	39S	13E	4850
Howard Prairie	32	38S	4E	4500
Hyatt Prairie Reservoir	15	39S	3E	4900
Lake of the Woods	11	37S	5E	4960
Park Headquarters	8	31S	6E	6550
Quartz Mountain	2	38S	16E	5320
Seven Lakes No. 2	26	33S	5E	6200
Seven Mile	20	33S	6E	5725
State Line (Cal)	21	48N	11E	5750
Strawberry	4	40S	16E	5760
Summer Rim	23	33S	16E	7100
Sycan Flat	25	31S	14E	5500
Taylor Butte	21	33S	11E	5100

Pacific Power and Light Company's Snow Station

NAME	LOCATION SEC	TWP	RGE	ELEV
Chiloquin (PP&L)	34	34S	7E	4187
Crystal (PP&L)	26	34S	6E	4200
Fort Klamath (PP&L)	22	33S	7½E	4150
Harriman Lodge (PP&L)	3	36S	6E	4200
Kirk (PP&L)	1	33S	7E	4533

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Bear Flat Meadow	27	36S	19E	5900
Camas Creek	5	39S	21E	5720
Cox Flat	16	37S	18E	5750
Crowder Flat (Cal)	30	47N	11E	5200
Dismal Swamp (Cal)	31	48N	16E	7200
Patton Meadow	28	38S	18E	6800
Quartz Mountain	2	38S	16E	5320
State Line (Cal)	21	48N	11E	5750
Strawberry	4	40S	16E	5760
Willow Creek	13	40S	21E	6020

Abert Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Bear Flat Meadow	27	36S	19E	5900
Colvin Creek	12	36S	21E	6550
Cox Flat	16	37S	18E	5750
Finley Corrals	11	36S	16E	6000
Mill Creek	1	34S	17E	6200
Quartz Mountain	2	38S	16E	5320
Sneman Valley	15	37S	21E	6600

Summer Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Summer Rim	23	33S	16E	7100

Silver Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Silver Creek	25 & 26	29S	13E	4900
Sycan Flat	25	31S	14E	5500

Warner Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Camas Creek	5	39S	21E	5720
Dismal Swamp (Cal)	31	48N	16E	7200
Hart Mountain	1	36S	25E	6350
Sherman Valley	15	37S	21E	6600
Willow Creek	13	40S	21E	6020

Guano Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Bald Mountain (Nev)	17	45N	21E	6720
Hart Mountain	1	36S	25E	6350
Little Bally Mt. (Nev)	8	45N	19E	6600

HARNEY BASIN WATERSHED (12)

Silvies River - Silver Creek

NAME	LOCATION SEC	TWP	RGE	ELEV
Call Meadows	29	20S	33E	5340
Delintment Lake	28	19S	26E	5600
Emigrant Butte	14	21S	27E	5000
Idlewild Camp	27	20S	31E	5200
Izee Summit	28	16S	29E	5293
Rock Spring	23	18S	32E	5100
Snow Mountain	1	19S	26E	6220
Starr Ridge	20	15S	31E	5150
Stinking Water	34	21S	34E	4800
Willow-Bald	19	22S	29E	5000

Donner Und Blitzen River

NAME	LOCATION SEC	TWP	RGE	ELEV
Buck Pasture	28	29S	35E	5300
Fish Creek	4	33S	33E	7900
Hart Mountain	1	36S	25E	6350
Silvies	35	32S	33E	6900
"V" Lake	31	35 S	32½E	6600

Trout and Whitehorse Creeks

NAME	LOCATION SEC	TWP	RGE	ELEV
Oenio Creek	14	41S	34E	6000
Disaster Peak (Nev)	8	47N	34E	6500
Oregon Canyon	8	40S	40E	6950
Trout Creek	10	41S	38E	7800

Horney Lake

NAME	LOCATION SEC	TWP	RGE	ELEV
Buckskin Lake	25	29S	30E	5200

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - NOAA, National Weather Service
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

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COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"